Colorado River Storage Project
Flaming Gorge Working Group
Meeting Minutes
April 13, 2006

Participation

This meeting was held at Western Park, Vernal, Utah. Attendees are listed below.

Purpose of Meeting

The purpose of operation meetings (held in April, and August) is to inform the public and other interested parties of Reclamation's current and future operational plans and to gather information from the public regarding specific resources associated with Flaming Gorge Reservoir. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the Green River.

General

Ed Vidmar called the meeting to order at 10:07 a.m. with 32 present (See signup sheet for attendance). Ed indicated that the first presentation would be the hydrology forecast from Rick Clayton, followed by a presentation of the Flaming Gorge technical working group's proposal for 2006 spring and base flow releases. These will be followed by open discussion. We are taking minutes and want to take everyone's comments back to Reclamation so that we can arrive at the best operational scenario for Flaming Gorge this spring. Before starting with Rick Clayton's presentation, all present introduced themselves and their affiliations.

Hydrology - Rick Clayton

Rick Clayton then gave his presentation on hydrology (see presentation posted on web site). Rick reviewed snowpack, forecast, and dry, average and wet scenarios, taking both the Yampa and Upper Green into account. Rick ended his presentation with an explanation of the process now in effect for arriving at the final decision on spring and base flow releases. First, if the Recovery Program has any plans to request special flows for research purposes, these need to be conveyed to the Flaming Gorge technical working group (FGTWG). Then, the FGTWG convenes and reviews snowpack, hydrology forecasts, and any Recovery Program requests, and comes up with proposed releases for spring peak and base flow. That proposal is then shared with the FG Working Group as we are doing today so that we can receive feedback from the interested public and learn of any other resource issues that should be factored into the decision. Then, Reclamation reviews all of this information and arrives at a final decision. Since the forecasts are subject to further change all the way to the start of peak runoff, Reclamation's decision is subject to further refinement as needed.

Commissioner McKee asked what is the full reservoir elevation; Rick responded that 6040 is the designed full reservoir level without any margin for error, we add a buffer to that to assure safe reservoir and dam operations. Someone asked a question on the flow routing model, Rick Clayton explained that the model he uses for forecasting is not Riverware because he needs a model with a daily timestep, Riverware has a monthly timestep. Dr. Romney asked, will all issues be fully considered including mosquitoes? Ed answered that yes, all issues will be fully considered. Commissioner McKee asked what releases from the dam we expect if the forecasts

remain consistent. The answer was, somewhere between power plant capacity and 8,600 cfs, depending on Yampa flows, so that we can achieve 18,600 cfs for 14 days. Commissioner McKee asked, if we can achieve flows needed for recovery just with the Yampa, can we back off at Flaming Gorge Dam? The answer was, our standard approach would be to supplement the Yampa as needed to achieve the Reach 2 targets. If the Yampa is running high enough on its own to achieve the target, then FG releases might or might not be moderated, the primary consideration remains dam safety/reservoir management, and inflows to the reservoir are monitored along with the forecast. Commissioner McKee noted that he is for recovery of the fish, but hopes it can be achieved at lower flows. He also hopes that this will be a true 'working group' situation were issues are discussed and considered. Ed indicated that Rick's slideshow would be available later in the meeting if more discussion is desired. In response to a question, Ed indicated that Ashley Creek is at about 80% of normal this year. The Duchesne was at 140% to 150% of normal last year and is much lower this year. Boyd Kitchen affirmed that the south slope is pretty dry this year.

FGTWG proposal for 2006 - Peter Crookston

At 10:47 a.m., Peter Crookston began his presentation on the FGTWG proposal for 2006. He provided some background on the Flaming Gorge EIS process and FGTWG establishment and also reviewed the 3 reaches of the Green River, the ESA consultation process with FWS, the Recovery Program, the 1992 Biological Opinion, the difference between the No Action and Action alternatives in the EIS, and the 5 hydrologic classifications. He then presented the FGTWG proposal for the different forecast scenarios. If it is a wet average year, the proposal is to achieve 18,600 cfs at the Jensen gauge for 14 days (these don't have to be consecutive) and during that time frame, achieve 20,300 cfs at the Jensen gauge for one day, as occurred last year. Denny Breer asked why 20,300 cfs was a target; Larry Crist of FWS gave the reasoning and biological basis for that target. Peter also presented the base flow targets under the 3 scenarios and temperature targets at base flow. Peter explained the .1 meter (about 4 inches) stage change limitation at the Jensen gauge. In response to a question, Rick Clayton indicated that Peter's presentation will also be posted on the web site. Denny Breer asked how long operations at power plant capacity (4600 cfs) would be expected; Rick Clayton indicated that this is a key point; 4600 cfs releases will be maintained after the peak targets have been met, until flows at Jensen gauge drop below 14,000 cfs or until the desired release volume has been achieved.

Ted Rampton asked how the proposal compares to last year's flows. Rick Clayton replied that we had one day at 20,300 cfs and 6 days total at 18,600 cfs. Rick noted that this is a target for average years and right now we are forecast for a 'wet average' year. So the FGTWG proposal is for a flow that is expected in 25% of average years, and in 40% of all years. Ed Vidmar noted that we will not consider using the spillway this year to meet targets. Rick Clayton noted that these 'average year' flows are the toughest to meet. Dry year targets are easy because the water just isn't there; wet year targets are easy because they will be met just operating for dam safety in most cases. 18,600 cfs for 14 days is the most challenging target. Ted Rampton asked about the condition of the spillway. Warrant Blanchard responded that it is in good shape, it has not been used since repairs were made in 1984. Ted asked whether use of the spillway is a maintenance concern; Warren replied that yes, some damage would always be expected after the spillway is used. Beverley Heffernan noted that this was addressed in the EIS; Reclamation has reservations about using the spillway to meet target flows.

Dam Bypass - Discussion

This year, bypasses will only be made through the bypass tubes. Warren Blanchard noted that the third powerplant unit, presently down for major maintenance, is 75% probable to be back in operation by spring runoff. If it is not available, maximum releases from the dam would be 7,000 cfs. Dr. Romney asked that Reclamation give serious thought to mosquitoes and public health effects, and consider options to moderate for mosquitoes.

Denny Breer asked, relative to the period of bypasses at the dam, how much within day fluctuation there would be. He expressed concern about double peaking. Rick Clayton responded that he expected operations during bypasses to be similar to last year, jerking the river around is a concern. Heather Patno from Western clarified that the 'double hump' is a flow only requested during winter operations. Ed Vidmar noted that within-day fluctuations are primarily a function of power demand. Denny Breer stated that he would prefer to see as little fluctuation as possible in Reach 1 to facilitate better trout fishing.

Flood Control - Discussion

Commissioner McKee stated that flood control is an authorized purpose of the dam, and he disagrees with our interpretation of flood control. He is supportive of fish recovery but wants flows that achieve the biological objectives without causing flood damages. Barry Jensen from the Ute Tribe stated that releases from Flaming Gorge Dam don't have much of an impact on Reaches 2 and 3, and so asked why we would force change with FG releases that cause mosquito problems and stranded livestock. Larry Crist, FWS, explained the reasoning behind the flows and durations. Barry asked, what do the fish do for the land? Beverley Heffernan noted that recovery of the fish enables continued water development. Pat Nelson from the Recovery Program explained the reasoning behind the flows, biology, geomorphology, cleaning the spawning substrate, etc. Larry Crist added that the FG EIS Record of Decision will help, we don't have all the answers and we are operating with the best available data. Through adaptive management we may well find over time that lower flows will achieve the same benefits. Ed Vidmar explained how operation of Flaming Gorge Dam is the tradeoff for additional depletions from the Green River system.

Endangered Fish - Larry Crist

Someone asked how the endangered fish are doing. Larry Crist responded that overall, since the operational refinements in 1992 in response to the Biological Opinion, the fish seem to be doing better although there was some decline during the drought years. Tom Chart, FWS, added that the releases from FG dam are just one component of the Recovery Program's efforts to recover the fish, the others include nonnative fish management and habitat restoration. Barry Jensen asked, if the endangered fish populations decrease during drought years and increase during wet years, does that mean that the populations stay stable in average years? And if so does that mean we should try for average flows every year? Pat Nelson noted again that we don't have all the answers and are working with best available science; Larry Crist added that it is reasonable to expect adjustment of the flows over time as we gain additional information. Barry noted that 2005 flows were tough on the reservation, Ed Vidmar responded that the flows at Jensen last year were average and did not cause damages; the situation on the reservation was mainly affected by the extremely high flows on the Duchesne and White Rivers. Heather Patno noted that Western is also supportive of lower releases from FG Dam which is why Western funded the

Recovery Program research efforts last year. Dr. Romney asked about the effects of nonnative fish on the endangered species, don't they also benefit from the flows? Tom Chart responded that yes, nonnative species are a significant concern and nonnative fish control is a key Recovery Program activity. Dave Speas added that some of the predators flourished during the drought years and wetter year flows could help to control them. Dave also noted that endangered fish aside, the more natural hydrograph will have significant benefits for the riparian corridor including riverine health and productivity. Boyd Kitchen asked for clarification: We operated under the '92 biological opinion for 13 years, did that help the endangered fish? Larry Crist responded that yes, it did benefit the fish although they were hurt by the drought years. Boyd then asked, how long will it take to see if the flows from FG dam are doing any good? Dave Speas responded that the Recovery Program is tasked with developing a plan that will answer that question. It was observed by Reclamation staff that we have to manage the reservoir too, dam safety is a priority and we have to make sure our releases are at the right level relative to inflows to the reservoir. Ed Vidmar noted 1983 as an example, we lost control of the reservoir and hope to avoid repeating that scenario. That is why we have designated 6033 as full reservoir level instead of the designed 6040, so that we have a safety margin. Melissa Trammell, NPS, noted that part of the Recovery Program's research will need to be evaluating how different flow scenarios affect both the endangered fish and the various nonnative species. Dr. Romney noted that extinction is a natural thing; the flows from the Yampa are not the problem, our releases from Flaming Gorge Dam cause the mosquito problems.

Roger Schneidervin, Utah Division of Wildlife Resources, stated that the Record of Decision benefits the reservoir fishery according to Wyoming Game and Fish, because more stable reservoir levels will benefit kokanee salmon and the trout in the reservoir. Roger also provided an update on the mud snail research below Flaming Gorge Dam and DWR's collaboration with Western on studying the effects of winter double peaking on the trout in the Green River. The USU graduate student doing the mud snail research has noted a seasonal increase in population followed by a drop-off, higher spring flows appear to help deter the expansion of mud snail populations. For the trout study, DWR working with Western help will collect spring data and PIT tag a number of trout in order to track incremental growth during the fall survey. They are working with Western and Argonne and USU personnel to fix identified weaknesses in the IBM model; they expect to convene in early summer. Vinson (USU) study of invertebrates also is continuing. Roger thanked Reclamation for putting together today's presentations. When asked whether more volunteers were needed for the April 21-22 electrofishing, Lowell stated that they have enough volunteers but anyone who wishes is welcome to come and watch.

Spring Releases - Discussion

At noon, Rick Clayton invited the group to weigh in with comments on one specific element of the spring releases: Should Reclamation fluctuate dam releases as often as needed to 'flatten' Yampa River flows, or hold steady and allow whatever fluctuations at Jensen the Yampa does on its own? For example, which of those is better for mosquito control? What impacts would there be in Reach 1 and Reach 2? Denny Breer stated that in Reach 1, public safety should be the top priority, along with recreational values. Stable flows are preferred, volume isn't the issue but fluctuation is. A question was asked, what is the difference in water temperatures between the bypass tubes and the powerplant? Warren Blanchard responded that there isn't much difference in the spring, the powerplant releases are about 41° and the tubes are about 39°.

Dr. Romney stated that he would like to see a single brief peak, as short as possible. Commissioner McKee stated that it depends on whether spikes cause higher flows that in turn cause flooding or mosquito problems. Walt Donaldson, UDWR, stated that the state would prefer to see stable flows in order to get consistent data for the trout study. Melissa Trammell, NPS, stated that the Park Service would prefer stable flows, the Recovery Program would probably prefer more fluctuation in Reach 2, larval entrainment improves with fluctuating flows. Rick Clayton noted that if operating for stable releases from the dam, more bypassing would probably be necessary. Rick Clayton encouraged everyone to give this issue more thought and email any additional comments by April 30 to Ed Vidmar. Heather Patno asked, where will the April 21-22 trout sampling take place? The answer was at Tail Race (just below the dam) and Little Hole.

Commissioner McKee asked, if we operate to achieve 18,600 cfs for two weeks at Jensen, will we reduce dam releases to below powerplant capacity if the Yampa is meeting the target all by itself? The answer was no, probably not during an average year. Denny Breer asked, if our plan is to operate at powerplant capacity and bypass when necessary, aren't we already planning to fluctuate? Rick Clayton responded yes, the issue is, how often should we fluctuate? Rick again encouraged all to email their comments by April 30. Warren Blanchard asked, how high would we plan to go at Jensen? Rick Clayton responded that the highest target is 26,400 at Jensen, this is probably not something we would consciously try to achieve but a target that would be achieved on its own in wet years. Barry Jensen asked, why don't we increase releases earlier and hold steady? Rick Clayton responded that we tried that in 1995 and received a lot of criticism from this group as a result.

The question was asked, will ramp rates be adhered to when using the bypass tubes? Rick Clayton noted that there is a ramp rate that applies on the descending limb of the hydrograph but he is unclear on the ramp rate on the ascending limb. Larry Crist stated that the ramp rate at higher flows won't make much difference, Ed Vidmar added that public safety is our primary consideration when considering ramp rates but at higher flows we wouldn't expect there to be wading fishermen in the river. All present were invited to provide comments on what are acceptable up and down ramp rates. Melissa Trammell noted that currently we have fluctuations of 800 cfs/hour, where does the 500 cfs ramp limitation come from? Rick Clayton responded that it comes from the 2000 flow and temperature recommendations. A member of the audience observed that she understands the need to comply with the Endangered Species Act, but we also need to control West Nile Virus, it can affect everyone. Dr. Romney was asked whether there are quantifiable studies of the correlation between flows and mosquitoes. Dr. Romney said yes, this information can be made available. No published studies but there is a distinct correlation, many variables come into play. A question was asked, relative to controlling the reservoir level, would higher flows last longer than two weeks? Rick Clayton replied that yes, higher flows could go a little longer than two weeks, probably three weeks maximum if current forecasts hold. Ed Vidmar noted that again, dam safety is our primary consideration, if the Green River gets wetter than higher releases would last longer.

In response to Joe's question about mosquito acreage, Dr. Romney stated that two years ago, they sprayed 6400 acres along the Green River; last year they sprayed over 24,600 acres. The season starts around May 20, or when higher flows begin.

In Conclusion

Walt Donaldson, Dr. Romney and Melissa Trammel all expressed thanks and compliments to the Bureau for taking the time to prepare and conduct today's meeting. Jerry asked, what is the most probably reservoir elevation after spring runoff? Rick Clayton answered, 6030 feet around the end of July/early August.

Next Meeting

Ed Vidmar announced a tentative date for the next Flaming Gorge Working Group meeting will be Tuesday, August 22, 2006, at 10 a.m. at Western Park in Vernal. Denny Breer asked, how late will comments be accepted, it is better for them to make comments as late as possible, April 20 or later, so that they can respond to best available forecasting data. Rick Clayton responded that comments would be accepted until April 30, send them to Ed Vidmar. Pat Nelson added that he has available in the back of the room, brochures that address why we should care about endangered species, anyone interested is welcome to take them. Meeting was adjourned at 12:38 p.m.

Presentations

Western Presentation of Double vs Single Peak Flows
http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/DoubleVSsinglePeak.pdf
Utah Diversion of Wildlife Resources
http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/GreenRiverFlowMtg2005.pdf

Previous Meeting Minutes

Flaming Gorge Working Group Meeting Minutes:
November 2, 2005 - Update
October 28, 2005 - Update
August 25, 2005
April 20, 2005
August 19, 2004

April 15, 2004**Associated Documents**

Flaming Gorge Working Group Documents:
Flow & Temperature Recommendations: Spring 2006
http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/FGTWGFlowSpring2006.pdf
Proposed Flow and Temperature Targets 2006
http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/FGTWGFlowProposal2006.pdf
Flaming Gorge Working Group - April 2006
http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/FlamingGorgeWorkGroupApr06.pdf

Next Meeting

Meeting adjourned 4:15 p.m. Next meeting date was not scheduled but would be expected to be in April 2006.

Attendees:

Name	Organization	Telephone Number
Ted Rampton	UAMPS	
Kevin Clegg	USFS	435.781.5245
Dennis Breer	GROGA	435.885.3355
Peter Crookston	Reclamation	801.379.1152
Brian Raymond	Daggett Countty	435.784.3218
Roger Schneidervin	DWR	435.885.3164
Rick Clayton	Reclamation	801.524.3710
Kerry Schwartz	Reclamation	801.379.1150
Walt Donaldson	UDWR	435.789.9453
Larry Crist	USFWS	801.975.3330x126
Melissa Trammell	NPS	801.539.4255
Dave Speas	Reclamation	801.524.3863
Beverley Heffernan	Reclamation	801.379.1161
Ed Vidmar	Reclamation	801.379.1182
Steve Romney	Uintah Mosquite	435.389.4105
Boyd Kitchen	USU Extension	
Steve Huler	Reclamation - FGFD	435.885.3258
Heather Patno	WAPA	
Mike McKee	Uintah County	435.781.5382
Jerry Taylor	Lucerne Valley	
Dan Alonso	Ouray NWR	
Craig Collett	Commission - Daggett County	
Darlene Burns	Uintah County Public Lands	
William Conroy	Ashley National Forest	
Alex Gouley	Ashley National Forest	
Bill Stroh	Ashley National Forest	
Pat nelson	RIP	
Lowell Marthe	Utah DWR	
John Milleen		
Tom Chart	USFWS	
Jeff Schramm	USFS	
Warren Blanchard	Reclamation	
Barry Jensen	Ute Indian Tribe	
Pam Juliane	Congressman Matheson	